CLAIM AMENDMENTS:

1. (currently amended) An optical observation apparatus including:

an optical system (2) which produces an image of the object (1) being observed, and a video device (7) for recording the image and for producing an image signal representative of the image,

characterised in that

the video device (7) includes a first memory (71) for temporary storage of the image signal, a replaceable second memory (73) in data communication (77) with the first memory (71), and a control device (75) in control communication (76B, 76C) with both memories (71, 73) for controlling the storage procedure and data transfer from the first to the second memory, wherein the control device is adapted for controlling the storage procedure for the first memory in such a way that the image signal is stored over a predetermined period of time and an oldest image signal is continuously overwritten by a fresh image signal, and that transfer of at least a portion of content of the first memory (71) to the second memory (73) takes place as a reaction to a trigger signal; and

a third memory (80) which is in data communication (81, 82) both with the first memory (71) and also with the second memory (73) and in signal communication (83) with the control device (75), wherein the at least a portion of content of the first memory is transferred to the third memory as a reaction to the generated trigger signal while the second memory is being replaced.

2. (original) An optical observation apparatus according to claim 1 characterised in that the data communication (77) between the first and second memories is designed for transfer at a high data rate.

3. (original) An optical observation apparatus according to claim 1 characterised in that the second memory (73) has a memory capacity which is at least astwice as high as that of the first memory (71).

4. (canceled).

5. (canceled).

6. (original) An optical observation apparatus according to claim 1 characterised in that the optical system (2a, 2b) is a stereoscopic optical system, that the image produced by the optical system (2a, 2b) includes two stereoscopic partial images and that the video device includes two first and two second memories, a respective one for each stereoscopic partial image.

7. (original) An optical observation apparatus according to claim 6 characterised in that the optical system for each stereoscopic partial image includes its own observation channel (20a, 20b) and that a first memory and a second memory are associated with each observation channel (20a, 20b).

8. (original) An optical observation apparatus according to claim 1 characterised in that the video device (7) includes a still camera.

9. (original) An optical observation apparatus according to claim 1 characterised in that it is in the form of an operation microscope or an endoscope.

10. (currently amended) An operation microscope including:

an optical system (2) which produces an image of the object (1) being observed during a surgical operation, and a video device (7) for recording the image and for producing an image signal representative of the image,

characterised in that

the video device (7) includes a first memory (71) for temporary storage of the image signal, a second memory (73) in data communication (77) with the first memory (71), and a control device (75) in control communication (76B, 76C) with both memories (71, 73) for controlling the storage procedure and data transfer from the first to the second memory, wherein the control device is adapted for controlling the storage procedure for the first memory in such a way that the image signal is stored over a predetermined period of time and an oldest image signal is continuously overwritten by a fresh image signal, and that transfer of at least a portion of content of the first memory (71) to the second memory (73) takes place as a reaction to a trigger signal generated in response to an observable situation of the surgical operation,

wherein the optical system and video device are disposed in an optical, longitudinal axis.

11. (previously presented) An optical observation apparatus including:

a stereoscopic optical system which produces two stereoscopic partial images of the object being observed, the optical system for each stereoscopic partial image includes its own observation channel, wherein each observation channel includes a video device for recording the stereoscopic partial image and for producing an image signal representative of the stereoscopic partial image,

characterised in that

each video device includes a first memory for temporary storage of the image signal, a second memory in data communication with the first memory, and a control device in control communication with both memories for controlling the storage procedure and data transfer from the first to the second memory, wherein the control device is adapted for controlling the storage procedure for the first memory in such a way that the image signal is stored over a predetermined period of time and an oldest image signal is continuously overwritten by a fresh image signal, and that transfer of at least a portion of content of the first memory to the second memory takes place as a reaction to a trigger signal.

12. (new) A method for recording images of an object in an optical observation apparatus during a surgical operation, the method comprising:

producing an image of the object being observed during the surgical operation;

recording the image and producing an image signal representative of the image;

temporarily storing the image signal in a first memory and controlling the storage procedure for the first memory in such a way that the image signal is stored over a predetermined period of time and an oldest image signal is continuously overwritten by a fresh image signal;

generating a trigger signal in response to an observable situation of the surgical operation; and

transferring at least a portion of content of the first memory to the second memory as a reaction to the generated trigger signal, wherein the portion of content of the first memory includes image signals representative of the observable situation.

13. (new) The method as in claim 12, wherein the observable situation occurs at a first point in time and the generating of the trigger signal occurs at a later second point in time.

14. (new) The method as in claim 13, further comprising selecting a predetermined portion of the first memory to be transferred after generating the trigger signal.

15. (new) The method as in claim 12, wherein the second memory is replaceable, further comprising:

transferring the at least a portion of content of the first memory to a third memory as a reaction to the generated trigger signal while the second memory is being replaced.

16. (new) The method as in claim 15, further comprising transferring the contents of the third memory to the second memory upon the second memory being replaced in the optical observation apparatus.